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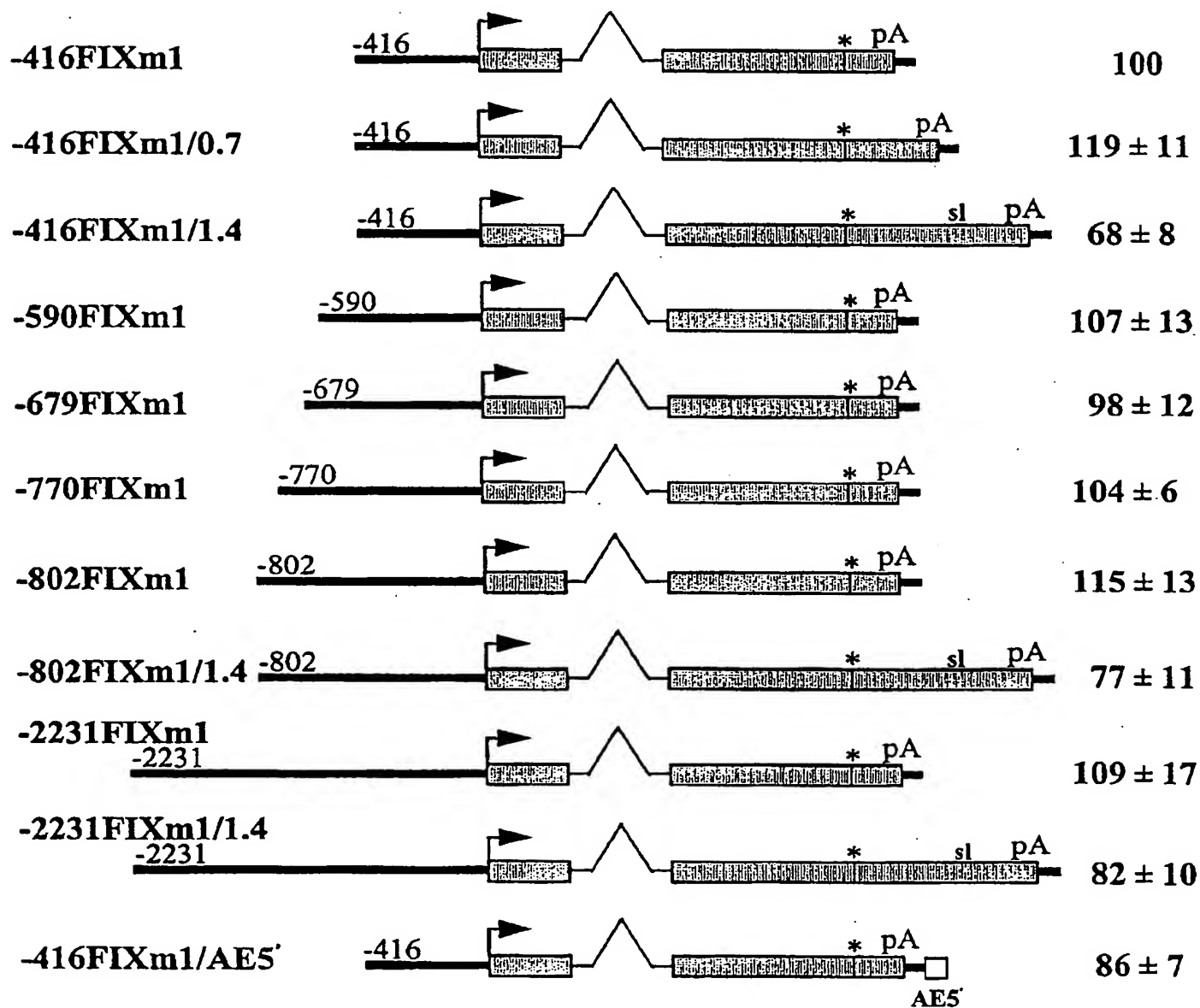
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Figure 1



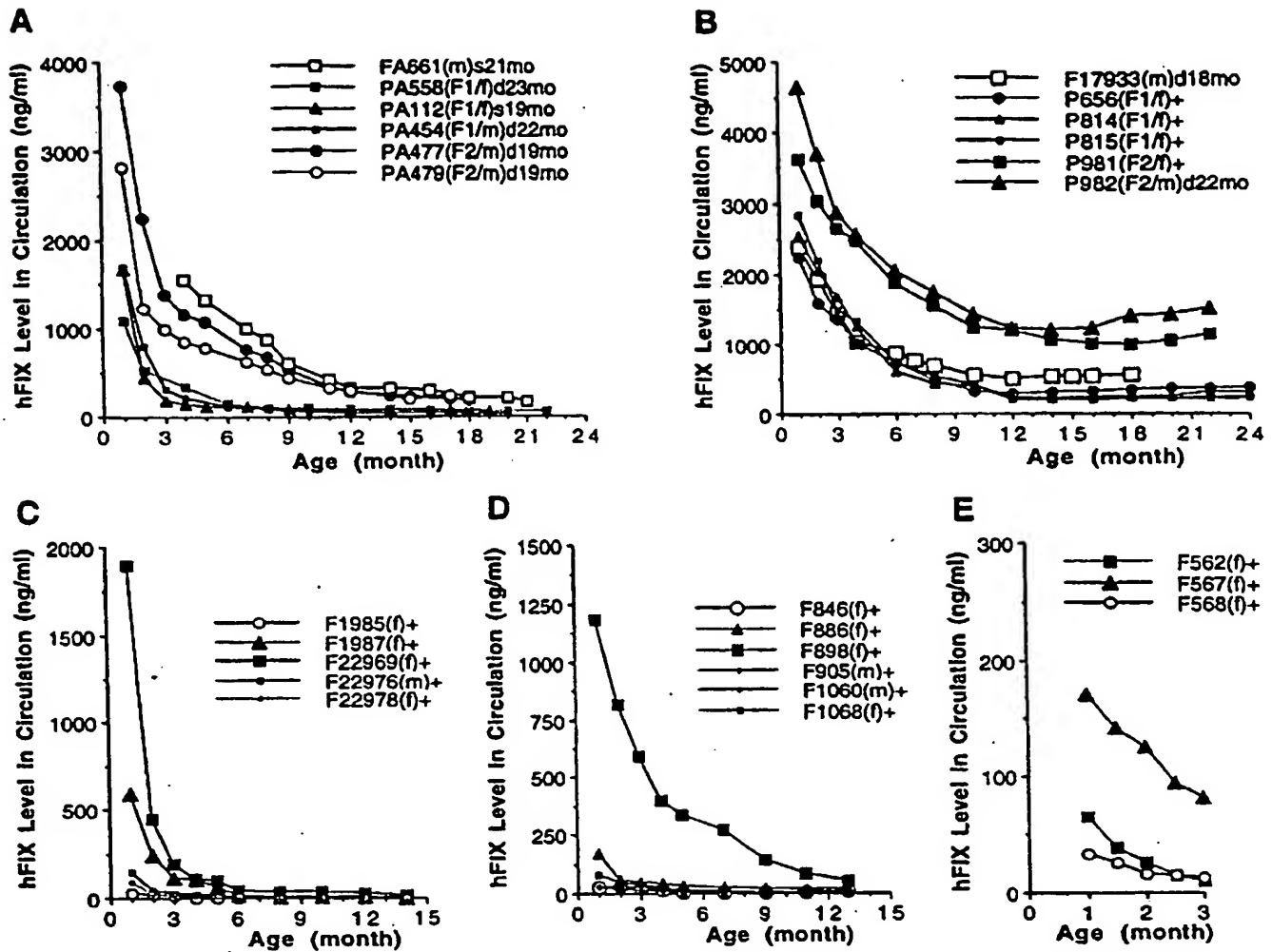
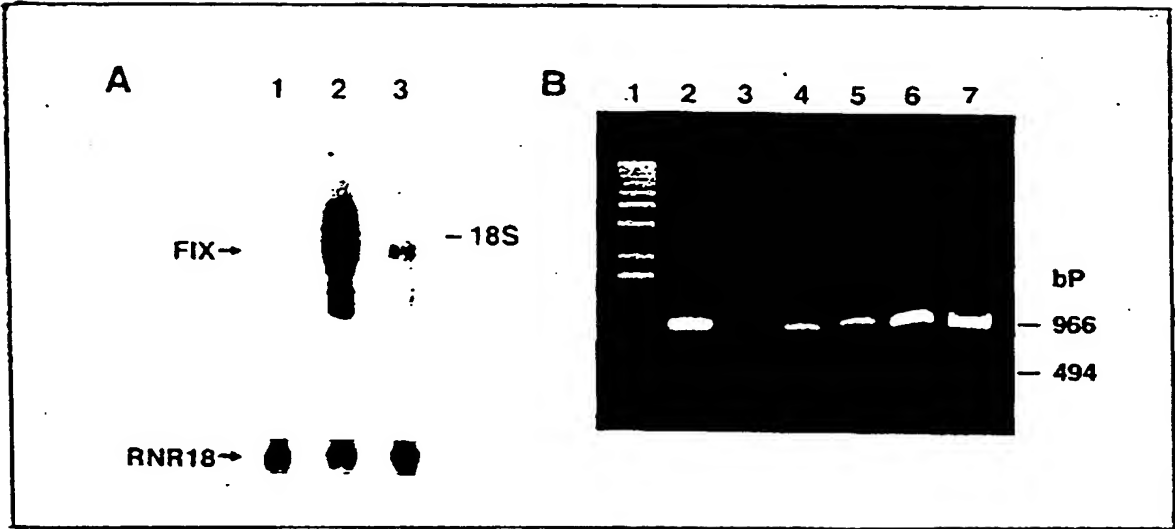


Figure 2

Figure 3



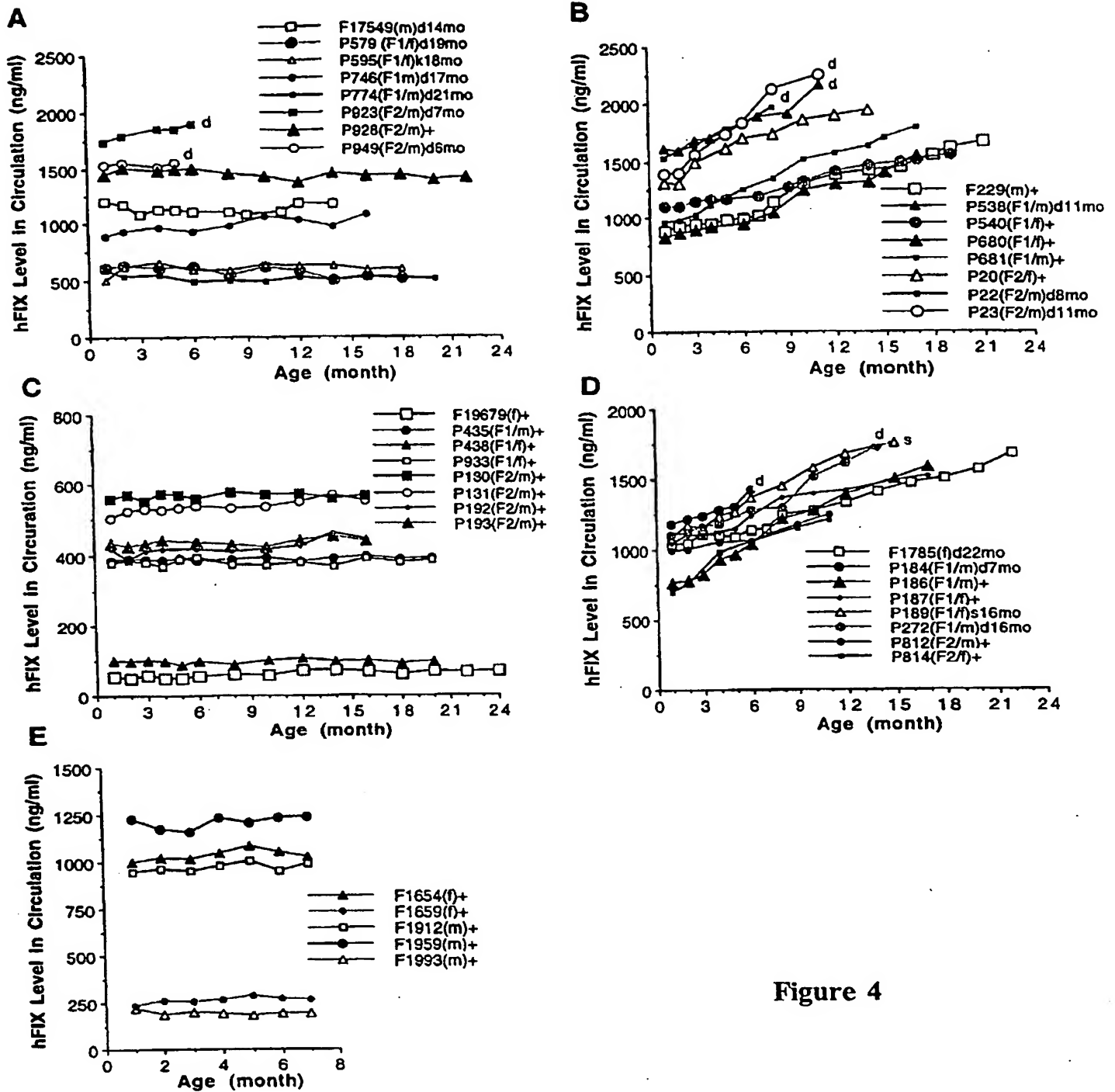


Figure 4

Figure 5

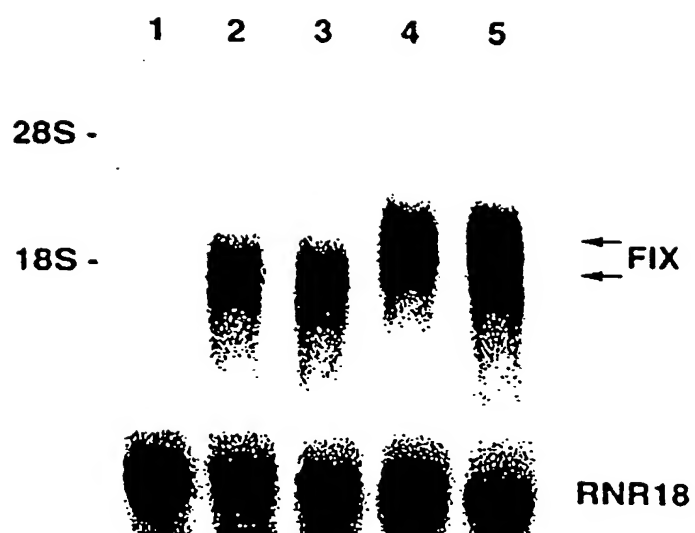
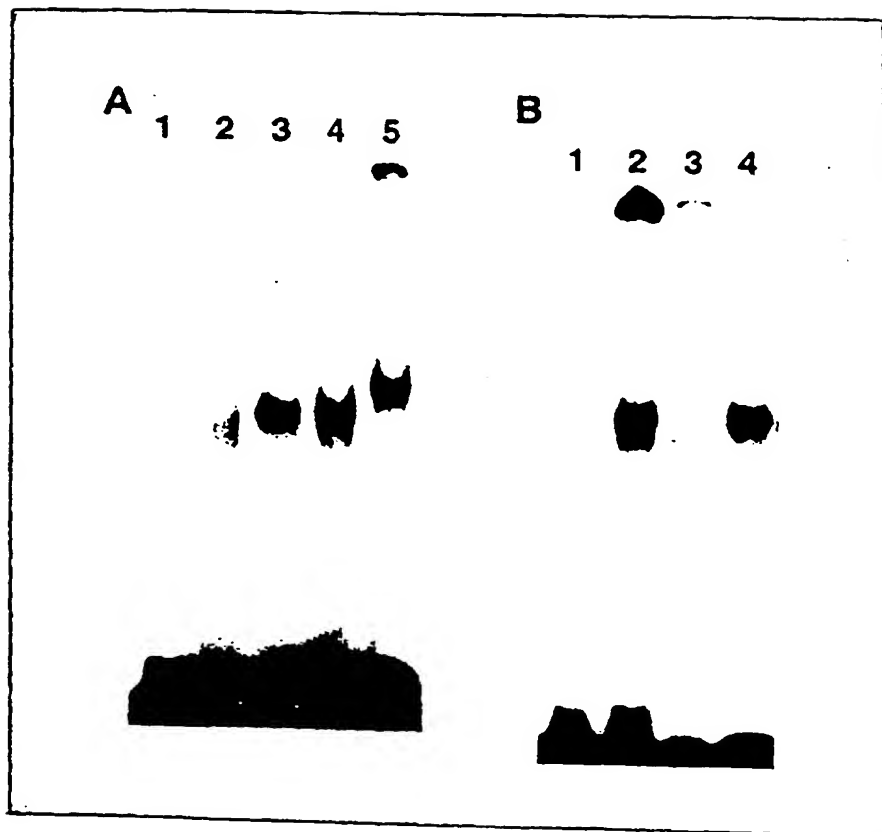


Figure 6



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Figure 7

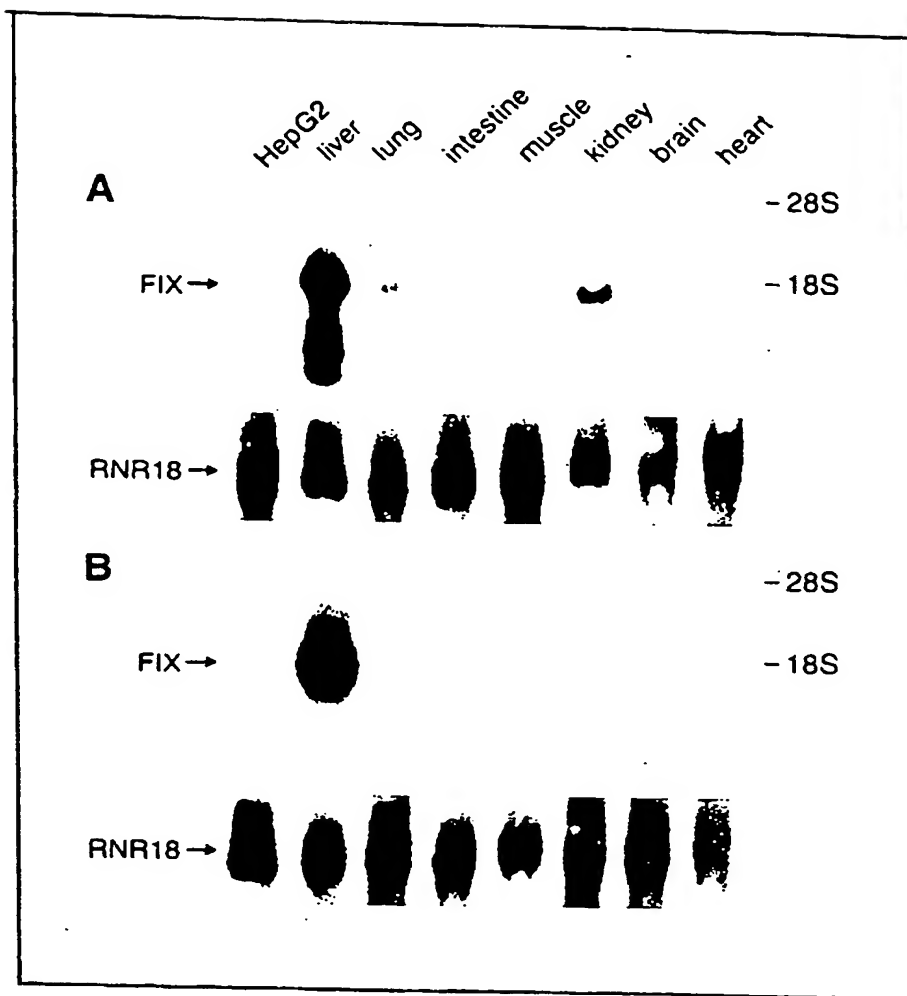


Figure 8A

GTATATCTAG	AAAACCCCAT	TGCTCTATTC	CAAAATCACC	TTAAGATGGA	TAGGCAACTT	CAGCAAACTC	TCAGGATAAC	AAAATCAATG	TGCAAAAATC	-2866
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CTACTTACAA	GGGATGTGAA	GGACCTCTTC	AAGGAGAACT	ACAAAGCAGT	GTCTAATGAA	ATAAAGAGC	ATACAAACAA	ATGGAAGAAC	ATTACATGCT	-2666
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										-46
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										Met
Gln Arg Val Asn Met Ile Met Ala Glu Ser Pro	Gly Leu Ile Thr Ile Cys Leu Leu Gly Tyr Leu	Leu Ser Ala Glu Cys								113
CAG CGC GTG AAC ATG ATC ATG GCA GAA TCA CCA	GGC CTC ATC ACC ATC TGC CTT TTA GGA TAT CTA	CTC AGT GCT GAA TGT								
ACA G GTTT	CTTTCCTTTT	TTAAATACA	TTGAGTATGC	TTGCCCTTTA	GATATAGAAA	TATCTGATGC	TGCTCTCTTC	ACTAAATTTT	GATTACATGA	211
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TATACACACA	TATATGATA	TATATGATA	CACATATATG	TATATATGTA	TATATATGTA	TATATATGTA	TATATATGTA	TATATATGTA	TATATATGTA	5611
GAGAGAGAG	AGAGGAGAGG	AAGGAGGAG	GGAGGAGAA	ATATGATTTA	GATAGAGACA	TCATCTCTCC	AGAGTTCAGG	AGTGTCTCTT	CAGACTAGGT	5711

Figure 8B

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-17										
Val Phe Leu Asp His Glu Asn Ala Asn Lys Ile Leu Asn Arg Pro Lys Arg Tyr Asn Ser Gly Lys Leu										
CTTTTACATT	TCAG TT	TTT CTT	GAT CAT	GAA AAC	GCC AAC	AAA ATT	CTG AAT	CGG CCA	AAG AGG	6393
-1										
+1										
Glu Glu Phe Val Gln Gly Asn Leu Glu Arg Glu Cys Met Glu Glu Lys Cys Ser Phe Glu Glu Ala Arg Glu Val Phe Glu										
GAA GAG TTT GTT CAA	GGC AAC	CTT GAG	ACA GAA	TGT ATG	GAA GAA	TGT AGT	TTT GAA	GAA GCA	CGA GAA	6474
38										
Asn Thr Glu Arg Thr										
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39										
46										
Thr Glu Phe Trp Lys Gln Tyr Val										
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CAGGAGAGTA	AAGTGAAGCT	TAGGGAAGTT	AAAAGAACTG	CCAAAGGCTG	CCCATGTTGG	GAGTCAATGA	GCCCAAGAA	GAAGCCAAAT	TCTCTGCTGC	8663
TCACACCCCT	GTCTTACCTA	TACACCTCCA	GGGCTTCAA	ATCTAAATGC	AGTATTATCT	TAAACAGGAA	CCTGGTAGTC	TTAAACAGGA	TCTCTGCTGC	8763
TGTTAAGATC	TTGCTCTTGT	TTGATTTTGA	CCCAAACTGT	CTATGGCTTT	GCCTGAACCC	AAAGTACACA	CAGCCTAGAA	ACCAAGGAGG	AACCAATATG	8863
GGGATAAAT	GACACTCAT	TATACGACAT	CTCTCAGCAA	ATGATTTCTT	GTGTAGTCTG	CTGAAAGCCC	AGACCTTTTC	AGTAAACAT	CTGAAATAAT	8963
TCACATTTGT	TGCTCTATAA	TATAAAGGCG	AAATGTAGCT	CATTTTTAGA	CCAGTCTGGA	ACATCAATAG	TAAACAAACA	GAGATAACCC	ATTTTCTTTT	9063
CATAGAAAT	GAACAAATTA	GAGTATCTGT	GCAAAAGCAT	ATCAGATCTA	GGAGCAGGTC	GGACAAAGTC	TAATTTTAA	ATAAGCAAT	TTTCCAGGGA	9163
GGGACTACTT	ATGATAAAGG	GATATTAGTC	TCTTAGTCAA	CGGAAGCTGG	ATACACGCTT	CTGACAGAGA	AGAGGGAGAA	TAGGCAAGAA	TCTACACACC	9263
AGATGCTCAAG	GAGATTGCTT	TAAATATAGC	ACTGATAAT	AGAAATTTCT	CAGTTTCCC	CTTTTCCCCT	ATTTCTTGAT	TCATTATGTT	ATCTTTATCT	9363
CTTACTCTGT	TGTTTCTCAT	ATATTGAGTC	TTACAGATCA	AGCTCCCAAT	TTTTTCTCA	GGGGTATTTT	TCTAGTTCAA	AGTGGCTACC	ATCTCCCTTC	9463
TGTTCTTATT	CATCTTCTC	TCCCAAGCT	CCTTTAGAAG	TGTGATTAA	GGCAGGAC	TAAGAAACCA	GACTTAAAGA	TTCCCTTCTC	ATTTCTGACT	9563
TTCTCTTCT	ACCTTCTCT	TCTCTCTGT	TCTTACCAT	CAGTGTCTT	AAAGGCTTTC	AAAGTACAGG	TAAATGCAGA	TACTTCAAGA	AAAGGCAGAT	9663
GGAAACATTA	CCAAATGATA	CATAAATAAA	GCACACTGTA	GAATCTTTT	AAATCTCTGA	TGATATATCG	AATGCTGCT	CTCACATTAC	CTAGACCATT	9763
TGAACCCGAA	TTTGTAAAT	ATAGACTATC	TTTAAAGTAT	ACAGATGCT	TTCTGATGTT	TTTCTATTGT	CTTGAACCAT	TACTGCTAT	GATACATCAA	9863
AGTTAAGTGA	CAATACAGAA	AAGCAGATTC	ATTGCTCTCC	TGCTTAGGCG	GTCAGTTCTT	AAAGTGGA	CGCATATAT	TATCTAGCT	AGTTTGTCT	9963
ACAAAGCTG	CAATAGAGCA	TGTGTGAGCA	TAGAGATAAT	ATTGTTGAA	GCAATTAAT	TTGACTTGGG	ATTAACCTG	CCATCACTT	ATAAGGAAGG	10063
ATTGAAATCT	CTTCTCAGC	TGTGCTGTA	TAGTACTTT	CTATACAAA	ACGTCCTCT	CCCTCTTCCC	TTGGATTGCA	TAAACTATGT	ACATGCTCTC	10163
CTCAGGGGCA	GTTTCTAGG	ACAGTGTGAG	CCTAAGGATC	TTTGTTTGGG	TGGCTTTTAA	AAACTCAGGA	AGACAGGAGG	ATCATATGCT	TATAGGCGGC	10263
TGCTTCTCAG	GTCAGTAGTT	TTGCTCTGAC	CCTAATAATCA	GACTCCCATC	CCAATGAGTA	TCTACAGGGG	AGGACCGGGG	ATTCTAAGCA	GTTTACGTGC	10363
47										
Asp Gly Asp Gln Cys Glu Ser Asn Pro Cys Leu Asn Gly Gly Ser Cys Lys Asp Asp Ile										
CAATTCATTT	TCTTAACCTA	TCTCAAG	AT	GGA GAT	CAG TGT	GAG TCC	AAT CCA	TGT TTA	AAT GGC	10450
84										
Asn Ser Tyr Glu Cys Trp Cys Pro Phe Gly Phe Glu Gly Lys Asn Cys Glu Leu										
AAT TCC TAT	GAA TGT	TGG TGT	CCC TTT	GGG TTT	GGA TTT	GAA GGA	AAG AAC	TGT GAA	TTA G	10537
G										
AAAGTTTCCC	TCTGAAACAA	GTTGAAACTG	GAAAAATGCA	TATTTGGTGA	TCATAATTTT	TCTTAAAAAC	ATACCTTTGA	TGCTTATAAA	CATTTCATTT	10637
GTAAGTATAG	TTTTCAGAT	ATGAGTTTCAA	GAAGCTATAC	TAAATATCAAT	AACAATATTT	GGTAACTAAT	ATTAAGTAAT	AATGATGTTT	CGACTCAGCT	10737
TATTTATCTT	TATTACAACC	GTATGTGGTT	AGTACTATCA	TTATGGCCAT	TCTATGCGGA	TGAGAAAAAC	GCAACTCCAA	CGGCCAAAAA	TTACAGAGGC	10837
ATAATATGTT	TAGACAGGAC	TTAAACTTCA	GTGTGACCAA	AACCCATGCT	TCTAACTACT	ATATTAAAAA	CTCAGAGAAA	ACTGAAACCA	GAATAATGAA	10937
ATCATGACTA	AATTCCTAT	AACATAGGTT	AAAGTCAATT	AAAGTACAGAA	CTGGAGTATG	ACTGGCCAAAT	TATCCCATAT	AATGGGAATT	CTCCACATGT	11037
ACAAACCACT	TCATATGCTA	AACCTGTTGA	CAACATTCAA	AGCTCATCCC	TGAATTTGAC	TATATTGATT	ACATCGAAAA	TGTTTACATG	CAACCTTAGA	11137
ATCCTTGTGT	ACCTTTTCTT	CTCAAGGCTT	AGATTATTTT	TTTTTCCGAC	GTTTCTAGTA	ATTGGAGCAG	TAAACCCAGG	TGCTCCCTTAC	CTACTTGTTT	11237
ATTACCTCCA	GATGCAATAT	TACTGGTACT	GTGATTGAGA	AACGCACACA	GTGTAGATGA	GGAAATTTACT	TTTACTCTCT	ACACTCTGGA	AGAAATAGTA	11337
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CACCTCGAGA	GATAGGCTGA	AACGTTTCAGG	GCAATCATTC	TAGTTAAGA	ATATTAAATG	GCTATTGGGT	CCCTTTGGT	AGAAATAAGG	CTCTGTATG	12637
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ACTAGAGTGC	TCAGAAGCAC	ACCTGTACAT	ATATAAAGGC	TCGATTATAT	ATAGAGGTGC	CAGTGACGTA	CAGAAAGCAA	AAATTTCTTA	AAATACAAAA	1653
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Asp Val Thr Cys Asn Ile Lys Asn Gly Arg Cys Glu Gln Phe Cys Lys Asn Ser Ala
 AGTGTGTAC TGTCTATTTT GCTTCITTTA G AT GTA ACA TGT AAC ATT AAG AAT GGC ACA TGC GAG CAG TTT TGT AAA AAT AGT GCT 17724
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 Asp Asn Lys Val Val Cys Ser Cys Thr Glu Gly Tyr Arg Leu Ala Glu Asn Gln Lys Ser Cys Glu Pro Ala
 CAT AAC AAG CTC GTT TGC TCC TGT ACT GAG GGA TAT CGA CTT GCA GAA AAC CAG AAG TCC TGT GAA CCA GCA G GTCATATCT 17807

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GTCACATTG CCAATGAGAA ATATCAGGTT ACTAATTTTT CTCTAATTT TCTAG TG	Val Pro Phe Pro Cys Gly Arg Val Ser Val Ser Gln CCA TTT CCA TGT GGA AGA GTT TCT GTT TCA CAA	20397
The Ser Lys Leu Thr Arg Ala Glu Ala Val Phe Pro Asp Val Asp Tyr Val Asn Ser Thr Glu Ala Glu Thr Ile Leu Asp ACT TCT AIG CTC ACC GCG GCG GAG CGC CCG CCG		20426

20470	ATC	ATC	ACC	CGT	GCT	GAG	GCT	GTT	TTT	CCG	GAT	GTG	GAC	TAT	GTA	AAT	TCT	ACT	GAA	GCT	GAA	ACC	ATT	TTG	GAT	
20559	Asn	Ile	Thr	Gln	Ser	Thr	Gln	Ser	Phe	Asn	Asp	Phe	Thr	Arg	Val	Val	Gly	Gly	Glu	Asp	Ala	Lys	Pro	Gly	Gln	Phe
	Asn	ATC	ACT	CAA	AGC	ACC	CAA	TCA	TTT	AAT	GAC	TTC	ATC	CGG	GTT	GTT	GCG	GGA	GAA	GAT	GCC	AAA	CCA	GGT	CAA	TTC

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TGCGATCTGC	AGAAGATTTT	AGGCACGTTT	CAGCATCTAC	CAATTGTGGA	AGGCGCTCCG	AGATAGGACG	TGTGTGAAAG	AGCGGGCTCA	AAACCGACTAC	20757
CATCAGGCTG	AAAGAAGATT	TGGCATTAAG	GAACACAGCAT	AGCAGGATTA	CAGACAGCCG	ACTGGTCTAC	AACTAGTAAG	TCTGGGAAGT	AGGTCGCAAT	20857
TGTCAGCTCT	AGGCCACTAC	TGCAGCTTCA	CGCCCTGCCA	AAATCGTGTG	GAGTTGTGAA	GCTCTTAGGC	TAAGAAAAAT	TGGTATATTT	AAAGAGGGGTA	20957
AGCAAAAGGA	CYCAAGGAGG	TAAGCATTAAG	GCAAGAAGAT	GCTTGTCAAG	AAACAGGCCG	GAGAGAGAGT	CCTGATCTAC	CATCATATAT	TCTGTGGTAG	21057
CTGACAAATC	CTCGGGGAAC	TGCAGAAATG	AAATTTCTCT	GCTCTACACT	AGACCTACCA	AAATCAAGTA	TCTAGGGGTT	GGGGCCGACG	AGGTCGTGCC	21157
CAAGNACCA	CTCGGAGGTG	TTTGTATGCA	CATTATAGCT	TGAAACCTAG	GGCAAGGTCA	TGGGCTCATG	CCAAATATTC	CAGCAGCTTG	GAGAGCTGAG	21257
AGGAGGATAT	TGCTTTAAACC	CAGGATGATT	AGACACAGCT	CGCCCAACAG	CGCAAAACCC	ACCTCTAAAT	AAAAAAATAA	CAAAATATAT	CTAGGTGTGA	21357
AGGCTCCAC	CTGTGCTCCC	AGGATTTCAG	GAGGCTGAGG	TGGGAGAGAT	ACTTAGGCTG	GGAAGAGCTG	GGCTGCAGTG	AAATGTGATG	ACACCACTGG	21457

Figure 8D

ATTGACGCT	GAGTGACAGA	GTAAAGCCCT	ATCTCAAAAA	ACAGAAAAAG	AAAAACACTG	GCCCAAAAGG	AATGAACCTG	TTACAGAAAG	CGGGGTCAA	211
AAACCAAAAT	AATGACACTG	TACAGTAGTC	TCCTCGGGTG	CTTCACAGAC	ATTCTCCCAA	GCCTAGTCTG	CAAAACAACCT	ACATATGTAG	AATTACCTAT	212
GCACATTTT	CATTAAACAA	CCAGAGTCCA	TCCTTTGAGC	CTTCTCTGCG	TGTATACCTA	GCCTACAGCT	GAAGCGCTAA	AGATTCGCTG	TGTAGAAGA	213
AATAAACCCT	CTCTTTGGCC	CCCCCCCCCA	GGCAGGAAGC	CAGCATGCTC	CTTATATATA	GTCTGTGCTG	CCAACTAGAT	ACCACTAGCC	ATGATAGCT	214
ATTAAATTT	AAATTAACAT	CAATTAAGAG	GGATAAAAAA	TTCAATTCTC	CAATTCGACC	TGCCAAATTT	TAAGCAGATA	ACAAACCAT	GTGGCTAGTA	215
ACTACTGTAT	TGGAGAGTGC	AAGCGGAGAT	AGAAACACTC	ATTACTCGAG	AAATTTCTAT	TGGATAGCAC	TTATAATAGT	TTAGTGTAA	TTAAAGACTC	216
CTAGTGGCCA	CAGCTAGTAT	TAGTAGTAGT	TTTACTGGAT	TTCTCTACTG	AGGTTAGAA	CTCTGCCATT	AGAGACTGAT	AATTTTAAAG	TTTCAAACTC	217
TCAAACTGGT	GACAAATTTA	GCAGAAATCA	GGFAATGTCC	TCAGTTTAA	CAGCATTTGA	ATTCTTTGGG	ACTAGCTGTG	TATCTATCAC	TTTGCAATTA	218
GAATCGCTGC	CATTTTTCAA	CAATATGGAT	GTAAAGGTAT	ACACATATAT	TCGGGGATGT	GGAGGTAGOT	ATAATTGCAC	TACCTATCAC	GGATTCTTGA	219
TCAGAGAGTG	GCAGAAATCA	ACAATCAAGG	TTTTCCTTT	CTTTTACTCT	TCGTTTAA	AAAGACATA	TTTCTGTGAC	AAGCATATGT	GAGAAATGTA	220
TGGCAGACTG	TATGTTCTCT	TTTACCTCTC	CTGTTTCTCT	TTAATGTGAC	CCCTATGAGGA	CTGCTTCTCT	TACCTATCAC	CTGACTTAT	ATGACTATAA	221
CATATCTTTA	CTCTTCTTCA	CAACTCTGTA	ATATGTAGCT	CTTTTATGAA	CTTTCTGTG	ACGAATCTCT	CTTAATGCA	CAACTCTTCT	TTTCACTCAT	222
ATGTATTTAA	TATCCACTGA	TCTATCTCT	CTAATTTTGT	CATTTTGTGT	TCTCATGTAT	TTTCATTCTAT	TATGTGTCCA	CGACTGTAT	TATCGCTTCA	223
TACAACAAAA	GATCTACTTT	TATGACAAAT	ATCTTCTGTG	CGTTTGTGGG	ACATAGAAAC	GTGCAGACAT	TAGGGGATCT	AAGAATCCCA	ATAACATGGT	224
TAGCTAAGAA	GATAACTTCC	GTTTTAAATA	TGCCAAGATT	CAGGAGATCA	AAACCATCTC	GGCTAACATA	GTGAACACCC	GTCTCTTCCA	GAGATATAT	225
AAATTAGCCC	GGCGTGGTGT	CCAGCGCCTA	TGTCTCCAGC	TACACGGGAG	GCTGAGGCAG	GAGAATGCGG	TGAACCGGGG	AGGCGGAGCT	GGCAGTGAGC	226
CGAGATCCCG	CCACTGCACT	CAGCGCTGGG	CGACAGAGCG	AGACTCGCTG	TCAAAAAATA	AAAAAATAAA	AAATGCAAA	ATTTTAAAAA	AAAAAATAAA	227
AAGGATGCTT	GCTTTGTGAG	TTTAGCATTG	TCCTCTGTG	ATTTCAGAAA	TGAAATGGCA	AATACATTTA	AATGCAAACT	AAAAAGGGGA	ACAGGGGTATA	228
AAGGCTCAAT	TTAGTCACAT	CATTTCGGTT	TCCTACCCCA	CCCCTTTAAA	CAGAGATGTT	GGCAATGCTAT	TAAACAATCA	GATGTTTCTC	GAAGAAAGT	229
TTAGTAACTC	AAGCAGACAC	CTTATTTTCT	TCCTAACAGC	AAAGACACTAT	GAGATGCTGG	TGTGTTGTTG	TCGGGAGGGG	AGAAGATATA	AATGATACAT	230
ATATTTCTAA	ATCATTTTCA	GGCCTCACTG	CACACCTATA	ATTTTGTATC	CTGTATTCTT	TTTGTCTGTA	AGCTAGCTCA	AGATCATTTG	GAATGTTCAC	231
GATCACTACT	ATCATGCTAT	GCACACATAC	ACATGACACAT	GTTTTCACCT	CTGATTTCTT	CCACATGCA	TAAAGTFACT	GATGTGTACA	GATCTAAAGC	232
TCCTTTTATC	TTTTCCAAAG	GCAGAAGAGT	GAGCTACTTT	CCAGAAATAGT	TGTGAAGAGC	CGTCTCATAC	TTCTGCATAT	TTTCTCATAT	CCACCTTCCA	233
CCAGTCTCTC	TATGAATGGT	TACTGGTTT	CAAAAAATG	AGATAAATGT	AGTGTATATA	AGTCAATTTT	AGACAAATTT	AAACAGGAAA	TGAAAGAAAC	234
CAGAAATCTG	CTCTCAATTT	GGATGGGGCA	GGCTCACCAT	GTCTAGTTTA	ACTGCGAGG	AGGAAATACT	AGATATATA	AGATTGATTT	TCGACAGAGA	235
CTCTCTGTGA	TAAGGACTGA	AAGAGAAAGC	ANGCAACAGA	CTGGGGCTTC	ACTGGGTGAA	ACAGTTTACT	AGATTGATTT	CGACATGAGA	CTGCAGGAAA	236
CAGTGTCCAC	TAGAAAAGAG	TGTTTCAAAA	TGCTTAGTCT	TCAATAAGAAC	TCATAGAAAC	ACATATAGAA	AGCAATATAT	TAAGTATGAA	TACTGTTTAG	237
AAATAAAGTG	ATCACTTGGT	GAGAAATCT	CAAAAAGAG	CCCAAGAAAG	CCCAATAGAA	GTTCCTCTTC	AGATTGTTT	TCCTTTATCT	TCAGGGTGGG	238
AGCTGTCTAA	AGAAAAGCTT	TAGGTAGACT	TGTTGCAAGA	GCCACATAGA	GCCACAGAGG	ATCTGGGATG	ATCTGGGATG	ATGAAACAT	AGAAAAGCTT	239
CGAAGCAGAT	TGTAGCTTCC	ATTAAGAAAG	CTTTCAACCA	CCCAACACCA	CCCAACACCA	CTGCGGTTGT	TAGTACAGTT	AGGGTGAAG	TTGCAAGGCT	240
CAAAATTTTG	TGGGAATTTG	TGACTTAACT	AGGCTTAAAG	AGCTGTCTCT	CCAGCTCTCT	CAGGCTTGA	GGGACGAAAT	GGGACGAAAT	GTGTATGAA	241
CCAGAGATAT	GCGAGGCTTA	GGGCTTTAC	GGGCTTTAC	CTCAGCTTGC	CTCAGCTTGC	CAGGCTTGA	CATTGAGGGA	TATCCCGTGT	GGGCTACCGG	242
TCAATTTCTA	CCTTATTTCA	CTTTCGGAAG	CCGCTGGCGG	CCCTACTCTG	CTCATCTCTC	CTCAAGCCAA	AGGCACTGGC	CCCTGTGTTG	GGGCGGGGG	243
GGTAAAGCTG	TCCGGAAGG	ACGCGGGTGA	GGCCAAATGA	AGGAGGTACT	TCAGTTTCCC	TCAGATGTTG	GCGGCGGGGG	AGCTTCTTAA	GTCCCGAGG	244
CGGGAAGAGG	AGCAGGGCTT	GTGAAGAAAT	ACTTCAGGAG	TAGAAAAGAG	AGCTGAGGAG	GTAAATGCA	CTACACAGCA	ACAGAAATGA	CTTGAGAACT	245
GAGTATAGAT	ATGCTTAGAG	CTGTAGTAA	CTTAAACAA	TGTTGAAATG	CATACCGAGA	CGTAGGAAG	AAATGAAGAA	CAACACCGCA		

Figure 8E

GCCTAATAAA	ATTGTTGTTG	AATAAATTGG	GCTAAAGGCA	GAAGGGTCAT	AATTTTCAGAA	CCCACGTCGC	ACCGTCCTCC	AAGCATCCAT	AGTCTCTTTG	30329
ATATACCCCT	ATTATCACTC	ATTTCACTGA	GGTACAATTA	GTTCCTGATG	TAGCCATTTC	CATACCAGAA	GGCCTTCCCA	AAATCAGTGG	TCATGTCACC	30429
CATCCTTTTA	TCTCTGGTGC	TTGGCACAAC	CTGTAGCAGG	TCTCTCAGAA	ACAAACATTT	GAATTAATCG	CCAAATCAGT	TTGCTCTCAA	AAAAGGGGTG	30529
AGGATACCTG	AAATTTGGAA	AATCTAGGAT	AATTCATGAC	TAGTGGATTG	ATTATCACCA	ATGAAAGGCT	TATAACAGCA	TGAGTGAACA	GAACCATCCT	30629
TATGATAGTC	CTGAATGGCT	TTTTGGTCTG	AAAAATATGC	ATTGGCTCTC	ATTACATTTA	ACCAAATTA	TCACAAATATA	AGAATGAGAT	CTTTAACATT	30729
CCCAATTAGG	TCAGTGGTCC	CAAGTAGTCA	CTTAGAAAAT	CTGTGTATGT	GAATACTGT	TTGTGACTTA	AAATGAAATT	TATTTTTAAT	AG GT GAA	30826
His Asn Ile	Glu Glu Thr	Glu His Thr	Glu Gln Lys	Arg Asn Val	Ile Arg Ile	Ile Ile Pro	His His Asn	Tyr Asn Ala	Ala	
CAI AAT ATT	GAG GAG ACA	GAA CAT ACA	GAG CAA AAG	CGA AAT GTG	ATT CGA ATT	ATT CCT CAC	CAC AAC TAC	AAT GCA GCT		30907
Ile Asn Lys	Tyr Asn His	Asp Ile Ala	Leu Leu Glu	Leu Asp Glu	Pro Leu Val	Leu Asn Ser	Tyr Val Thr	Pro Ile Cys		30988
ATT AAT AAG	TAC AAC CAT	GAC ATT GCC	CTT CTG GAA	CTG GAC GAA	CCC TTA GTG	CTA AAC AGC	TAC GTT ACA	CCT ATT TGC		
Ile Ala Asp	Lys Glu Tyr	Thr Asn Ile	Phe Leu Lys	Phe Gly Ser	Gly Tyr Val	Ser Gly Trp	Gly Arg Val	Phe His Lys		31069
ATT GCT GAC	AAG GAA TAC	ACG AAC ATC	TTC CTC GAA	TTT GGA TCT	GGC TAT GTA	AGT GGC TGG	GGA AGA GTT	TTC CAC AAA		
Gly Arg Ser	Ala Leu Val	Leu Gln Tyr	Leu Arg Val	Pro Leu Val	Asp Arg Ala	Thr Cys Leu	Arg Ser Thr	Lys Phe Thr		31150
GGG AGA TCA	GCT TTA GTT	CTT CAG TAC	CTT AGA GTT	CCA CTT GTT	GAC CGA GCC	ACA TGT CTT	CGA TCT ACA	AAG TTC ACC		
Ile Tyr Asn	Asn Met Phe	Cys Ala Gly	Phe His Glu	Gly Gly Gly	Arg Asp Ser	Cys Gln Gly	Asp Ser Gly	Gly Gly Pro	Bis Val	
ATC TAT AAC	AAC ATG TTT	TGT GCT GGC	TTC CAT GAA	GGA GGT AGA	AGT TCA TGT	CAA GGA GAT	AGT GGG GGA	CCC CAT GTT		31231
Thr Glu Val	Glu Gly Thr	Ser Phe Leu	Thr Gly Ile	Ile Ile Ser	Trp Gly Glu	Glu Cys Ala	Met Lys Gly	Lys Tyr Gly	Ile	
ACT GAA GTG	GAA GGG ACC	AGT TTC TTA	ACT GGA ATT	ATT ACC TGG	GGT GAA GAG	TGT GCA ATG	AAA GGC AAA	TAT GGA ATA		31312
Tyr Thr Lys	Val Ser Arg	Tyr Val Asn	Trp Ile Lys	Glu Lys Thr	Lys Leu Thr	STOP				
TAT ACC AAG	GTA TCC CGG	TAT GTC AAC	TGG ATT AAG	GAA AAA ACA	AAG CTC ACT	TAA	TGAAAGATGG	ATTTCACAGG	TTAATTCATT	31399
GAATTGAAA	ATTACAGGG	CCCTCTACTA	ACTAATCACT	TTCCCATCTT	TTGTTAGATT	TGAATATATA	CATTCTATGA	TCATTGCTTT	TTCTCTTTAC	31499
AGGGGAGAA	TTCATATTTT	ACCTGAGCAA	ATTGATTAGA	AAATGGAACC	ACTAGAGGAA	TATAATGTGT	TAGGAAATTA	CAGTCATTTC	TAAGGGGCCCA	31599
GGCTTGACA	AAATGTGAA	GTTAAATCT	CCACTCTGTC	CATCAGATAC	TATGGTTCTC	CACATATGGA	ACTAACTCAC	TCAATTTTCC	CTCCTTAGCA	31699
GAATTCATC	TTCCCGATCT	TCTTTGCTTC	TCCAACCAA	ACATCAATGT	TTATTAGTTC	TGTATACAGT	ACAGGATCTT	TGGTCTACTC	TATCACAAGG	31799
CCAGTACAC	ACTCATGAAG	AAAGAACACA	GGAGTAGCTG	AGAGGGTAA	ACTCATCAAA	AACTACTACTC	CTTTTCCCTC	ACCCATATCC	TCAATCTTTT	31899
ACCTTTCCA	AATCCCAATC	CCCAATCAG	TTTCTCTCTT	TCTTACTCCC	TCTCTCCCTT	TTACCCCTCCA	TGGTCTGTAA	AGGAGAGATG	GGGAGCATCA	31999
TTCTGTTATA	CTTCTGTACA	CAGTTATACA	TGTCTATCAA	ACCCAGACTT	GCTTCCATAG	TGGAGACTTG	CTTTTCAGAA	CATAGGGATG	AAGTAAAGTG	32099
CTGAAAAGT	TTGGGGGAAA	AGTTTCTTTC	AGAGAGTTAA	GTTATTTTAT	ATATATATA	TATATATAAA	ATATATAATA	TACAAATATA	ATATATAGTG	32199
TTGTTGTGTA	TGGGTGTGTG	TAGACACACA	CGCATACACA	CATATAATGG	AAAGCAATAG	CCATTCTAAG	AGCTTGTATG	GTTATGCGAG	TCTGACTAGG	32299
CATGATTTCA	GGAAAGCAAG	ATTGGCATAT	CATGTAACT	AAATAAGCTG	ACATTGACCC	AGACATATTC	TACTCTTTCT	AAAAATAATA	ATAATAATGC	32399
TAACAGAAAG	AAGAGAACCG	TTGCTTTGCA	ATCTACAGCT	AGTAGAGACT	TTGAGGAAGA	ATTCAACAGT	GTGCTTTCAG	CAGTGTTCAG	AGCCAAGCAA	32499
GAAGTTGAAG	TTCCCTAGAC	CAGAGGACAT	AAGTATCATG	TCTCCTTTAA	CTAGCATACC	CCGAAGTGG	GAAGGGTGCA	GCAGGCTCAA	AGGCATAAGT	32599
CATTCGAATC	AGCCAACTAA	GTGTCCTTT	TCTGGTTTCG	TGTTCCACAT	GGAAACATTT	GATTATAGTT	AATCCTTCTA	TCTTGAATCT	TCTAGAGAGT	32699
TTCTGACCAA	CTGACGTATG	TTTCCCTTTG	TGAATTATA	ATTGGTGT	CTGGTCTA	CCTTGGCTTT	TTGTGGATTC	CATTGATGTG	AATCAGTCAC	32799
CTGTATTTG	ATGATGCATG	GGACTACTGA	CAAAATCACT	CTGACCCCTG	CAAGCTGCTG	CCTTCTCCTG	CCCCAACCTC	ACCCCAAGCC	AGGCCTCACT	32899
CTGTAGTTT	CTTTTAGTTT	TTTTAGTCAA	TATATTTTGG	TCTTCGCATA	TAAGTATAAA	TAAACATATT	TTTAAATTTT	TTGGCTGGGC	CCAGTGGCTC	32999
AGGCTATAA	TTCCAGCACT	TCTGGAGGCC	AAGGTGGGCG	GATCACCCTG	GGTTAGGAGT	TTGAGGCCAG	CCTGGCCAAC	ATGTTGAAAC	CCTGTCTCTA	33099
TAATAAATAG	AACAATTAGC	TGGGCTTGGT	AATGTGCACC	TATAATCCCA	GCTACTGGGG	AGGCTGAGGC	AGGAGAATCA	CTTGAGCCGTG	GGGAGCAGGG	33199
GTGCGGGAG	GTTCAGTGA	GACAAGATCG	CACCACTGCA	CTCCCATCTC	TGGGTGACAG	AGTGAGACTC	TGCTCAAAAG	AAAAATAATA	AATAAATACA	33299
TTCTTGAGG	CGTTTCTTGT	TAAATCAATC	ATGGAGAGGC	ATCCCAACA	GCACATTCAC	CAAAACACTC	TGAAAAATGT	TTTCAAAATG	AATATAACAC	33399
AGCAGAGAT	TGATGCTCTG	TTATCCAGTT	TTCAATAAAG	CACTGTGTGAG	CTGTCTCCCA	GAGAGGACAG	TGGTCTGAAT	CCACTGTAGA	CAGAATTGGC	33499
TTAACTAAC	TGTGAGTATG	GGCTTCAATA	AGTCACCTCT	CAITTTGGGAA	TTTGAATTTCT	CCACTTGTAT	AATGAGAGTA	TTTGACAGGA	TGCTCTCCCA	33599
ATCCCTTGC	AAATTTGTTA	GTCTGTGATT	TCAATGTTTT	ATTTTATTC	CTTCACTCAA	CAAAATAGTCA	AGGAGTAATT	GCTGTGTGCC	AAATACCAAC	33699
AGTATTCATT	AAATTTGAAT	TCAGATTTTA	TATATATATA	AATAATGTAT	AATGTGTATA	AATTGTTTGT	TGAGTGCCTA	CTACACTGCT	AGACAGTAGT	33799
TCTCAATAA	CTTGTAGCT	GAATCAGAA	CCATGTTTAT	CCGAGAGTAG	CAATTAGTCT	TGCATTCAGT	ATCGTGAAG	AAGGCCACAC	TTAAATAAGA	33899
ATAATGCTG	GGGTTTAGGT	TTTTATGAAA	AATGAAAGGA	AATTAGTTCT	GCTTTTGTG	ACTAAAGGAA	GGGAAGAGAG	AAGAGACACT	ATAATTTGCT	33999
CCCTCAGAT	TAAGGAGGAG	GCTAATTCAT	GCATTAACA	CCCTACTTCA	AAATTTGAATG	CTGGCCCTCAG	TGTAGCCCTCA	GCATCTCAA	ATTGTTAAAA	34099
GTAAAGACT	CTGGCCTTGT	TTCCATAGAG	ACCACCCCTT	ACAAAGGCCAC	CAATGGGAAA	GACTCTCTGT	ATTGGTCTTC	TCTGTGGCAG		34199
AGAAAGGAG	CTTTGGACCT	ATAAATCTCT	GAGCCACAGT	TCTTTTGGCC	ATGGGCTCAA	AAATGATTGA	ATTCAATCAT	AGCCACCTGT	GGCATATTGC	34299
CACTATTAAC	ATGTGGGGCC	TTTAAGCTCA	CTAAGAGCCA	ATGTCTTCAG	AGGCCGCCCT	GGCTTGATTC	TACCTAGGGC	ATTTCGACTT	GCCATATAAG	34399
ATCATTAAGT	GCTTTCAAAA	TTACTGTAGA	TACTTTGCC	AAATAGACTA	AAACATGCTG	CCGTCAATAT	GGAAAGTGACA	GATTAAAAAT	GAACCTCTGC	34499
AAAGTGAAG	AAAGTGTGCT	AAATATAATG	ACGTCAATTTA	ACTTGTCTGT	TAAAGTGTAT	TTTCTTATG	TCCTTTGAAT	ATTATTTGTT	TTTACTGTAC	34599
AGCAACCAAG	TACTGTCCAA	TTTTCTCTGC	CAAGGAAAAA	AGAAAAAGTG	TTCTCTCTTA	GTTACTTGAA	CCAAAAACAGA	CCAGTTTACA	AAATGGCTTA	34699
ATATAAATG	CTAAACAAGT	TTCCGAATCG	TACAGTCTAA	TCCAAGAAAT	TCAGAGCTGC	AAGGGCCCTT	AAACACCATC	CAACTCACTC	CACCTATTTA	34799
CGAGATTAAG	AGATTGAGCG	CAACATAAGG	CCAGGCCCAA	GAATAACAA	GACTAGAGCT	CAAGTCTCCC	CACTGTCTCC	CACTGTCTCC	TTGAAAGAA	34899
ATGCTTTCA	ACTGGAGTAC	ATTAACCTCTA	CTGTCTATAT	TTTTAGGGCA	GCTGGGCGAT	TCGTCAATGG	TGGCAATCTT	CTCAACAACC	CTGGGACTGA	34999
AACTGCTCG	GAATTCCTAC	TAACAAATCT	CTAATTGACC	AAAAGGTGAC	GAATCAAGG	AGACCAATAA	GGTAGCCTTG	GAAAGCAAGA	GTGGC	35099

Figure 9A

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1 gaattccgtg gatgtgcttt aaaaccacac ctaacgtttg agcacaagtc tcacgaactg
61 gcgctacaac ttcatacagaa acgaagtctc caaatctgtc caacgcaaaa acacaaagga
121 gtctaatac taagtcttcc aaccacaact gtctgctgcg cccggaaaaac aagccggggc
181 tctggggacc cggggctcag gccgcctcgc tccggcctag ccccgccacc ttagttgtgt
241 catccccgg gcatactgag catcccccg cggtccggc acagacgccc ggacctcagg
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421 gaaatgggag cttgggcgaa gcgctgatgg tcccgagggg aaagctcatg gaccggggct
481 ccctgccgcc ttccgactca gaagatctct tccaggacct cagtcacttc caagagacgt
541 ggctcgcaga agctcaggta ccggacagtg atgagcagtt tgttcctgat ttccattcag
601 aaaacttagc tttccatagc cccaccacca ggatcaagaa ggaaccccg agtccccgca
661 cagaccccg cctgtcctgc agcaggaagc caccactccc ctaccacccat ggagagcagt
721 gcctttactc cagacaaatc gccatcaagt ccccgctccc cggtgccccct ggacagtcgc
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901 tggacatgtg ccaactcctc acatctcctc agggaggggg ccgggaacct ctcccagccc
961 cctatcaaca ccaactgtcg gagccctgcc caccctaccc ccagcagaac ttcaagcagg
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2281 gcatgtgggc ggcagctggg ggggggtgtg gaagtagaga tggctctctg ccctaggcct
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2401 cccggaattc
```

Figure 9B

MTKSSNHNCLLRPENKPLWGPGAQAASLRPSPATLVVSSPGHA
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LGEALMVPQGKLMDPGSLPPSDSEDLFQDLSHFQETWLAEQVPDSDEQFVPDFHSEN
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PLQPFSRAEQQQSLLRASSSSQSHPGHGYLGEHSSVFQQPVDMCHSFTSPQGGGREPL
PAPYQHQLSEPCPPYPQONFKQEYHDPLYEQAGQPASSQGGVSGHRYPGAGVVIKQER
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KQEGIGAFREGPPYQRRGALQLWQFLVALLDPTNAHFIAWTGRGMEFKLIEPEEVAR
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Figure 10 (A)

```

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121 ctgctgctca ctgagttcca caggtgggag gaacagcagg gcttagagtg ggggtcattg
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301 cattcagcca gctcagggga aggacagggg cctgaagcc aggggatgga gctgcaggga
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901 acagcggagc gatgcaatct gatttaggct tttaaaggat tgcaatcaag tgggaccacac
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```


Figure 10 (B)

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6961 taggattctg gttctgctac ttctcagtg acattgaata gctgacctaa tctctctggc
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Figure 10 (C)

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7261 agtcatcatg tgccttgact cgggcctggc ccccccactc ctgtcttgca ggacaatgcc
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Figure 10 (D)

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10981 ctatgatctg aagagcgtcc tgggtcaact gggcatcact aaggtcttca gcaatggggc
11041 tgacctctcc ggggtcacag aggaggcacc cctgaagctc tccaagggtga gatcacctg
11101 acgaccttgt tgcaccatgg tatctgtagg gaagaatgtg tgggggctgc agcactgtcc
11161 tgaggctgag gaaggggccc agggaaacaa atgaagaccc aggctgagct cctgaagatg
11221 ccggtgattc actgacacgg gacggtgggc aaacagcaaa gccaggcagg ggctgctgtg
11281 cagctggcac ttctggggcc tcccttgagg ttgtgtcact gacctgaat ttcaactttg
11341 cccaagacct tctagacatt gggccttgat ttatccatac tgacacagaa aggtttgggc
11401 taagttgttt caaaggaatt tctgactcct tcgatctgtg agatttggtg tctgaattaa
11461 tgaatgattt cagctaaagt gacacttatt ttggaaaact aaaggcgacc aatgaacaac
11521 ctgcagttcc atgaatggct gcattatctt ggggtctggg cactgtgaag gtcactgcca
11581 gggtcctgtg cctcaaggag cttcaagccg tgtactagaa aggagagagc cctggaggca
11641 gacgtggagt gacgatgctc ttccctgttc tgagttgtgg gtgcacctga gcagggggag
11701 aggcgcttgt caggaagatg gacagagggg agccagcccc atcagccaaa gccttgagga
11761 ggagcaaggc ctatgtgaca gggagggaga ggatgtgcag ggccagggcc gtccaggggg
11821 agtgagcgtc tcctgggagg tgtccacgtg agccttgctc gaggcctggg atcagcctta
11881 caacgtgtct ctgcttctct cccctccagg ccgtgcataa ggctgtgctg accatcgacg
11941 agaaagggac tgaagctgct gggggccatgt ttttagaggc catacccatg tctatcccc
12001 ccgagggtcaa gttcaacaaa ccctttgtct tcttaatgat tgaacaaaat accaagtctc
12061 ccctcttcat gggaaaagtg gtgaatccca cccaaaaata actgcctctc gctcctcaac
12121 ccctcccctc catccctggc cccctccctg gatgacatta aagaagggtt gagctgggtcc
12181 ctgcctgcat gtgatctgta aatccctggg atgttttctc tg
```

Figure 11

```
1 caccagcatc atctcctcca attcatccag ctactctgcc catgaagata atagttttca
61 ggcggattgc ctcagatcac actatctcca cttgccagc cctgtggaag attagcggcc
121 atgtattcca atgtgatagg aactgtaacc tctggaaaaa ggaagggtta tcttttgccc
181 ttgctgctca ttggcttctg ggactgcgtg acctgtcacg ggagccctgt ggacatctgc
241 acagccaagc cgcgggacat tcccatgaat cccatgtgca tttaccgctc cccggagaag
301 aaggcaactg aggatgaggg ctcagaacag aagatcccgg aggccaccaa cccggcgtgc
361 tgggaactgt ccaaggccaa ttcccgttt gctaccactt tctatcagca cctggcagat
421 tccaagaatg acaatgataa cattttcctg tcacccctga gtatctccac ggcttttgct
481 atgaccaagc tgggtgcctg taatgacacc ctccagcaac tgatggaggt atttaagttt
541 gacaccatat ctgagaaaac atctgatcag atccacttct tctttgcaa actgaactgc
601 cgactctatc gaaaagccaa caaatcctcc aagttagtat cagccaatcg cctttttgga
661 gacaaatccc ttaccttcaa tgagacctac caggacatca gtgagttggg atatggagcc
721 aagctccagc ccctggactt caaggaaaat gcagagcaat ccagagcggc catcaacaaa
781 tgggtgtcca ataagaccga aggccgaatc accgatgtca ttccctcgga agccatcaat
841 gagctcactg ttctggtgct ggtaacacc atttacttca agggcctgtg gaagtcaaag
901 ttcagccctg agaacacaag gaaggaactg ttctacaagg ctgatggaga gtcgtgttca
961 gcactctatg tgtaccagga aggcaagttc cgttatcggc gcgtggctga aggcacccag
1021 gtgcttgagt tgcccttcaa aggtgatgac atcaccatgg tctcatctt gcccaagcct
1081 gagaagagcc tggccaaggt ggagaaggaa ctcaccccag aggtgctgca ggagtggctg
1141 gatgaattgg aggagatgat gctggtggtt cacatgccc gcttccgcat tgaggacggc
1201 ttcagtttga aggagcagct gcaagacatg ggccttgctg atctgttcag ccctgaaaag
1261 tccaaactcc caggtattgt tgcagaaggc cgagatgacc tctatgtctc agatgcattc
1321 cataaggcat ttcttgaggt aaatgaagaa ggcagtgaag cagctgcaag taccgctgtt
1381 gtgattgctg gccgttcgct aaaccccaac agggtgactt tcaaggccaa caggcccttc
1441 ctgggtttta taagagaagt tcctctgaac actattatct tcatgggcag agtagccaac
1501 ccttgtgtta agtaaaatgt tcttattctt tgcacctctt cctatttttg gtttgtgaac
1561 agaagtaaaa ataaatacaa actacttcca tctcacatt
```

Figure 12 A

```
1 ctgcagggggg gggggggggg gggggctgtc atggcggcag gacggcgaac ttgcagtatc
61 tccacgaccc gcccttacag gtgccagtgc ctccagaatg tggcagctca caagcctcct
121 gctgttcgtg gccacctggg gaatttcggg cacaccagct cctcttgact cagtgttctc
181 cagcagcgag cgtgcccacc aggtgctgcg gatccgcaaa cgtgccaact ccttcctgga
241 ggagctccgt cacagcagcc tggagcggga gtgcatagag gagatctgtg acttcgagga
301 ggccaaggaa attttccaaa atgtggatga cacactggcc ttctgggtcca agcacgtcga
361 cggtgaccag tgcttgggtct tgcccttggg gaccccgctg gccagcctgt gctgcgggca
421 cggcacgtgc atcgacggca tcggcagctt cagctgcgac tgccgcagcg gctgggaggg
481 ccgcttctgc cagcgcgagg tgagcttcct caattgctcg ctggacaacg gcggctgcac
541 gcattactgc ctagaggagg tgggctggcg gcgctgtagc tgtgcgcctg gctacaagct
601 gggggacgac ctctgcagt gtaccccgcc agtgaagtcc ccttgtggga ggccctggaa
661 gcggatggag aagaagcgca gtcacctgaa acgagacaca gaagaccaag aagaccaagt
721 agatccgcgg ctcatctgat ggaagatgac caggcgggga gacagccctt ggcaggtggt
781 cctgctggac tcaaagaaga agctggcctg cggggcagtg ctcatccacc cctcctgggt
841 gctgacagcg gccactgca tggatgagtc caagaagctc cttgtcaggg ttggagagta
901 tgacctgcgg cgctgggaga agtgggagct ggacctggac atcaaggagg tcttcgtcca
961 cccaactac agcaagagca ccaccgacaa tgacatcgca ctgctgcacc tggcccagcc
1021 cgccaccctc tcgcagacca tagtgcccat ctgcctcccg gacagcggcc ttgcagagcg
1081 cgagctcaat caggccggcc aggagaccct cgtgacgggc tggggctacc acagcagccg
1141 agagaaggag gccaaagaaa accgcacctt cgtcctcaac ttcatacaaga ttcccgtggt
1201 cccgcacaat gagtgcagcg aggtcatgag caacatggtg tctgagaaca tgctgtgtgc
1261 gggcatcctc ggggaccggc aggatgcctg cgagggcgac agtggggggc ccatggtcgc
1321 ctccctccac ggcacctggt tcctgggtgg cctgggtgagc tggggtgagg gctgtgggct
1381 ccttcacaac tacggcgttt acaccaagt cagccgctac ctcgactgga tccatgggca
1441 catcagagac aaggaagccc cccagaagag ctgggcacct tagcgacctt ccctgcaggg
1501 ctgggctttt gcatggcaat ggatgggaca ttaaagggac atgtaacaag cacaccggcc
1561 tgctgttctg tccttccatc cctcttttgg gctcttctgg agggaagtaa catttactga
1621 gcacctgttg tatgtcacat gccttatgaa tagaatctta actcctagag caactctgtg
1681 ggggtggggag gagcagatcc aagttttgcy gggctctaaag ctgtgtgtgt tgagggggat
1741 actctgttta tgaaaaagaa taaaaaacac aaccacgaaa aaaaaaaaaa aaaaaaaaaa
1801 aaaaaaaaaa aaaaaaaccc cccccgcccc cccccctgt cag
```

Figure 12 B

```

1 agtgaatctg ggcgagtaac acaaaacttg agtgtcctta cctgaaaaat agaggttaga
61 gggatgctat gtgccattgt gtgtgtgtgt tgggggtggg gattgggggt gatttgtgag
121 caattggagg tgagggtgga gccagtgcc cagcacctat gcactgggga cccaaaaagg
181 agcatcttct catgatttta tgtatcagaa attgggatgg catgtcattg ggacagcgtc
241 ttttttcttg tatggtggca cataaataca tgtgtcttat aattaatggt attttagatt
301 tgacgaaata tggaaatatta cctgttgtgc tgatcttggg caaactataa tatctctggg
361 caaaaatgtc cccatctgaa aaacagggac aacgttcctc cctcagccag ccactatggg
421 gctaaaatga gaccacatct gtcaagggtt ttgccctcac ctccctccct gctggatggc
481 atccttggtg ggcagagggtg ggcttcgggc agaacaagcc gtgctgagct aggaccagga
541 gtgctagtgc cactgtttgt ctatggagag ggaggcctca gtgctgaggg ccaagcaaat
601 atttgtgggt atggattaac tcgaactcca ggctgtcatg gcggcaggac ggcgaacttg
661 cagtatctcc acgacccgcc cctgtgagtc cccctccagg caggtctatg aggggtgtgg
721 agggagggct gcccgcggga gaagagagct aggtgggtgat tccctcagcc ccctccagcc
781 aggggtgctca acaagcctga gcttggggta aaaggacaca agggcctcca cctccaggcc
841 ctggcagcca cagtctcagg tccctttgcc atgcgcctcc ctctttccag gccaaagggtc
901 cccaggccca gggccattcc aacagacagt ttggagccca ggaccctcca ttctccccac
961 cccactcca cctttggggg tgtcggattt gaacaaatct cagaagcggc ctccagaggga
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1141 tgggtgggttg gggcaggggt tgaatttcca ggcctaaac cacacaggcc tggccttgag
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1261 ttccgagtct ggtgcctgca ctgggttggg ggtgtgagac cctactcctg gaggatgggg
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1381 aagggttggg tttttaataa accacttaac tcctccgagt ctcagtttcc cctctatga
1441 aatgggggttg acagcattaa taactacctc ttgggtgggt gtgagcctta actgaagtca
1501 taatatctca tgtttactga gcatgagcta tgtgcaaagc ctgttttgag agctttatgt
1561 ggactaactc ctttaattct cacaacaccc ttaaggcac agatacacca cgttattcca
1621 tccattttac aaatgaggaa actgaggcat ggagcagtta agcatcttgc ccaacattgc
1681 cctccagtaa gtgctggagc tggaaatttg accgtgcagt ctggcttcat ggctgcctc
1741 gtgaatcctg taaaaattgt ttgaaagaca ccatgagtgt ccaatcaacg ttagctaata
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2221 cccggggacc cttgtggcct ctacaaggcc ctgggtggcat ctgcccaggc cttcacagct
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2521 aggccagggc taccgtccac actatccagc acagcctccc ctactcaaat gcacactggc
2581 ctcatggctg ccctgcccc aacctttcc tggctctccac agccaacggg aggaggccat
2641 gattcttggg gaggtccgca ggcacatggg cccctaaagc cacaccaggc tgttggtttc
2701 atttgtgcct ttatagagct gtttatctgc ttgggacctg cacctccacc ctttcccaag
2761 gtgccctcag ctcaggcata cctcctcta ggatgccttt tccccatcc cttcttgctc
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2881 gagcccgga cacacctggg gaccttcct ggggtatagg tctgtctatc ctccagggtg
2941 ccctgcccaa ggggagaagc atgggttggg cttggttggg ggaggaaagg aagatgggg
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3061 ggcagccttt acagcagcag ccagggttg agtacttatc tctgggccag gctgtattgg
3121 atgttttaca tgacggctct tccccatgt ttttgatga gtaaattgaa ccttagaaag
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3361 agaccttccc aggtctctccc agctctgctt cctcagaccc cctcatggcc ccagcccctc
3421 ttaggccctt caccaagggt agctccctc cctccaaaac cagactcagt gttctccagc
3481 agcgagcgt cccaccaggt gctgcggatc cgaaaacgtg ccaactcctt cctggaggag
3541 ctccgtcaca gcagcctgga gcgggagtg ctagaggaga tctgtgactt cgaggaggcc

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Figure 12 B (continued)

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3601 aaggaaattt tccaaaatgt ggatgacaca gtaaggccac catgggtcca gaggatgagg
3661 ctcaggggag agctggtaac cagcaggggc ctcgaggagc aggtggggac tcaatgctga
3721 ggccctctta ggagttgtgg ggggtggctga gtggagcgat taggatgctg gccctatgat
3781 gtcggccagg cacatgtgac tgcaagaaac agaattcagg aagaagctcc aggaaagagt
3841 gtggggtgac cctaggtggg gactcccaca gccacagtgt aggtggttca gtccaccctc
3901 cagccactgc tgagcaccac tgccctcccg tcccacctca caaagagggg acctaagac
3961 caccctgctt ccacccatgc ctctgtgat cagggtgtgt gtgtgaccga aactcacttc
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4081 gggggtcgga agacagggtc tgtgtcctat ttgtctaagg gtcagatgcc ttggagccc
4141 ccagagtcct gtggacgtgg ccctaggttag tagggtgagc ttggtaacgg ggctggcttc
4201 ctgagacaag gctcagaccc gctctgtccc tggggatcgc ttcagccacc aggacctgaa
4261 aattgtgcac gcctggggcc ccttccaagg catccaggga tgctttccag tggaggtttt
4321 cagggcagga gaccctctgg cctgcaccct ctcttgccct cagcctccac ctccttgact
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4741 agggagtgat gggactggaa ggaggccgag tgacttgggt agggattcgg gtcccttgca
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5161 cccctcgga tctctggccg ctgacccctt acccgcctt gtgtcgcaga cggtagaccag
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6781 gaggattgct tgagcttggg agtttgagac tagcctgggc aacacagtga gaccctgtct
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7141 tgcagtactc cctgtggtca gctaagagca ccactccttc ctgaagcggg gcctgaagtc

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Figure 12 B (continued)

7201 cctagtcaga gcctctgggtt caccttctgc aggcaggagg aggggagtc agtcagtgag
7261 gagggctttc gcagttttctc ttacaaactc tcaacatgcc ctcccacctg cactgccttc
7321 ctggaagccc cacagcctcc tatggttccg tgggtccagtc cttcagcttc tgggcgcccc
7381 catcacgggc tgagattttt gctttccagt ctgccaaagtc agttactgtg tccatccatc
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7801 ttaagaagtt taaccaccta tgtaaggaga cacaggcagt gggcgatgct gcctggcctg
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8521 aaggtggggg atgcttcagg gaaagatgga cgcaacctga ggggagagga gcagccaggg
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8641 taaaaagagc tggaaagaca ctgctctgct ggcgggattt taggcagaag ccttgcctgat
8701 gggagagggc taggagggag ggccgggctt gaggtaacctt ccagcctcca catgggaact
8761 gacacttact gggttccctt ctctgccagg catgggggag ataggaacca acaagtggga
8821 gtatttgccc tggggactca gactctgcaa gggctcaggac cccaagacc cggcagccca
8881 gtgggaccac agccaggagc gcccttcaag ataggggctg agggagcca aggggaacat
8941 ccaggcagcc tgggggccac aaagtcttcc tggaaagacac aaggcctgcc aagcctctaa
9001 ggatgagagg agctcgctgg gcgatgttgg tgtggctgag ggtgactgaa acagtatgaa
9061 cagtgcagga acagcatggg caaaggcagg aagacacctt gggacaggct gacactgtaa
9121 aatgggcaaa aatagaaaac gccagaaagg cctgagtgcc cctaggctgga ggctgtcagg aggcagcct
9181 ccaggaaagt gcatatgaaa cattccaggt ggtcctgctg gactcaaaga agaagctggc
9241 gtgatgtcat catccacccc accctccttg ggtgctgaca gcggcccact gcatggatga
9301 ctgcggggca gtgctcatcc ggccttggtat gggctggagc caggcagaag ggggtgcca
9361 gtccaagaag ctcttgtca aggcagctg ttacaggtttg ggggacccc cccccaggt
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9481 gcttaagcaa gaggtctctt gtacacccag tattttgcag tagggggttc tctggtgccc
9541 cccccacctt gcccacccat tacctgcaca cacatgtttg tgaggggcta cacagacctt
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9781 tacagaggga gccctagcat ctatggcaat ttctggaggg ggggtctggc tcaactcttt
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9901 atgccccaaa gaaggcaag gggcttggtc tagaattccc aggtgctctt cccagggaac
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10441 tgggtggggc tcaggaaagt tatgacctg ggcctggga gaagtgggag ctggacctgg
10501 ccctctgccc tgcaggagag caccaccaact acagcaagag caccaccgac aatgacatcg
10561 acatcaagga ggtcttcgtc cccgccaccc tctcgcagac catagtggcc atctgctcc
10621 cactgctgca cctggcccag cgcgagctca atcaggccgg ccaggagacc ctcgtgacgg
10681 cggacagcgg ccttgccagag ccacagcagc cgagagaagg aggccaagag aaaccgcacc ttcgtcctca
10741 gctggggcta ccacagcagc gattcccgtg gtcccgcaca atgagtgcag cgaggatcat agcaacatgg
10801 acttcatcaa

Figure 12 B (continued)

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10861 tgtctgagaa catgctgtgt gcgggcatcc tcgggggaccg gcaggatgcc tgcgagggcg
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10981 gctgggggtga gggctgtggg ctcccttcaca actacggcgt ttacaccaaa gtcagccgct
11041 acctcgactg gatccatggg cacatcagag acaaggaagc cccccagaag agctgggcac
11101 cttagcgacc ctccctgcag ggctgggctt ttgcatggca atggatggga cattaaaggg
11161 acatgtaaca agcacaccgg cctgctgttc tgtccttcca tccctctttt gggctcttct
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11341 agctgtgtgt gttgaggggg atactctgtt tatgaaaaag aataaaaaac acaaccacga
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11461 gtgaggcttg accagctttc cagctagccc agctatgagg tagacatgtt tagctcatat
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11581 aggtctgact ccaaaaccca ggtgcttttt tctgttctcc actgtcctgg aggacagctg
11641 tttcgacggt gctcagtgtg gaggccacta ttagctctgt agggaagcag ccagagacct
11701 agaaagtgtt ggttcagccc agaatt
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Figure 13 (A)

SEQ ID NO:3

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cccagccctt gacaaaattg tgaagttaaa ttctccactc tgtccatcag atactatggg
tctccactat ggcaactaac tcactcaatt ttccctcctt agcagcattc catcttcccc
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tctttgggtc actctatcac aaggccagta ccacactcat gaagaaagaa cacaggagta
gctgagaggg taaaactcat caaaaacact actccttttc ctctacccta ttcctcaatc
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cctttttacc tccatggtcg ttaaaggaga gatggggagc atcattctgt tatacttctg
tacacagtta tacatgtcta tcaaaccag acttgcttcc atagtggaga cttgcttttc
agaacatagg gatgaagtaa ggtgcctgaa aagtttgggg gaaaagtttc tttcagagag
ttaagttatt ttatatatat aatatatata taaaatatat aatatacaat ataaatatat
agtgtgtgtg tgtatgcgtg tgtgtagaca cacacgcata cacacatata atggaagcaa
taagccattc taagagcttg tatggttatg gaggtctgac taggcattgat ttcacgaagg
caagattggc atatcattgt aactaaaaaa gctgacattg acccagacat attgtactct
ttctaaaaat aataataata atgctaacag aaagaagaga accgttcggt tgcaatctac
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gcaagaagtt gaagttgcct agaccagagg acataagtat catgtctcct ttaactagca
taccgccgaag tggagaaggg tgcagcaggc tcaaaggcat aagtcattcc aatcagccaa
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tctatcttga atctt

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SEQ ID NO:76

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cccagccctt gacaaaattg tgaagttaaa ttctccactc tgtccatcag atactatggg
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gctgagaggg taaaactcat caaaaacact actccttttc ctctacccta ttcctcaatc
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gcaagaagtt gaagttgcct agaccagagg acataagtat catgtctcct ttaactagca
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Figure 13 (B)

SEQ ID NO:77

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taccocgaag tggagaaggg tgcagcaggc tcaaaggcat aagtcattcc aatcagccaa
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SEQ ID NO:78

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taccocgaag tggagaaggg tgcagcaggc tcaaaggcat aagtcattcc aatcagccaa
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Figure 13 (C)

SEQ ID NO:79

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taccgccgaag tggagaaggg tgcagcaggc tcaaaggcat aagtcattcc aatcagccaa
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SEQ ID NO:80

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atcttctttt cttctccaac caaaacatca atgtttatta gttctgtata cagtacagga
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gcaagaagtt gaagttgcct agaccagagg acataagtat catgtctcct ttaactagca
taccgccgaag tggagaaggg tgcagcaggc tcaaaggcat aagtcattcc aatcagccaa
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tctatcttga atctt

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Figure 13 (D)

SEQ ID NO:81

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SEQ ID NO:82

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tctatcttga atctt

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Figure 13 (E)

SEQ ID NO:83

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agaacatagg	gatgaagtaa	ggtgcctgaa	aagtttgggg	gaaaagtttc	tttcagagag
ttaagttatt	ttatatatat	aatatatata	taaaatatat	aatatacaat	ataaatatat
agtgtgtgtg	tgtatgcgtg	tgtgtagaca	cacacgcata	cacacatata	atggaagcaa
taagccattc	taagagcttg	tatggttatg	gaggtctgac	taggcatgat	ttcacgaagg
caagattggc	atatcattgt	aactaaaaaa	gctgacattg	accagacat	attgtactct
ttctaaaaat	aataataata	atgctaacag	aaagaagaga	accgttcggt	tgcaatctac
agctagtaga	gactttgagg	aagaattcaa	cagtgtgtct	tcagcagtggt	tcagagccaa
gcaagaagtt	gaagttgcct	agaccagagg	acataagtat	catgtctcct	tttaactagca
taccccgaa	tggagaaggg	tgcagcaggc	tcaaaggcat	aagtcattcc	aatcagccaa
ctaagttgtc	cttttctggg	ttcgtgttca	ccatggaaca	ttttgattat	agttaatcct
tctatcttga	atctt				

Figure 14

```

GAATTCGTGA AGCATTTCCT ATGTGTACCT GCCCCTGGGC AAGGTGGGCC TGAATTGTTA -1403
GAGTGTTAGA GTTTTACCCT GTTCCTCTAG GAGGGCCTGG TACCACCACA GCCCAGCATG -1343
GTGTGGTGCC TCAGCAGGAG GCATCTGGTT ACAATCAACA CAAGCTGTTT CAGCCAATTT -1283
AAAGAACTT CAGGAGGAAT AGGGTTTTAG GAGGGCATGG GGACCCTCCT GCACCCGAAG -1223
CCAGGATGTG CCACCAATCA TAAGGAGGCA GGGGCCCTCT TCCGCTGCTC CCTGGGACTC -1163
TCTAGGTGTC CGTGGCCTCA GCCCCCCTCT GCACACCTGC ATCTTCCTTC TCATCAGCTT -1103
CCTCTGCTTT AAGCGTAAAC ATGGATGCCC AGGACCTGGC CTCATCTTTC CGAGTCTGGT -1043
ACTTATGGTG TACTGACAGT GTGAGACCTT ACTCCTCTGA TCAATCCCTT GGGTTGGTGA -983
CTTCCCTGTG CAATCAATGG AAGCCAGCGA GGCAGGGTCA CATGCCCTCT TTAGAGGTGC -923
AGACTTGGAG AAGGAACGTG GGCAAGTCTT CCCAGGAACA GGTAGGGCAG GGAGGAAAGG -863
GGGGCATCTC TGGTGACGCC CGGTTCCGAG CAGGAAGACG CTTAATAAAT GCTGATAGAC -803
TGCAGGACAC AGGCAAAGGT GCTGAGCTGG ACCCTTTATT TCTGCCCTTC TCCCTTCTGG -743
CACCCCGGCC AGGAAATTGC TGCAGCCTTT CTGGAATCCC GTTCATTTT CTTACTGGTC -683
CACAAAAGGG GCCAAATGGA AGCAGCAAGA CCTGAGTTCA AATTAATCT GCCAACTACC -623
AGCTCAGTGA ATCTGGGCGA GTAACACAAA ACTTGAGTGT CCTTACCTGA AAAATAGAGG -563
TTAGAGGGAT GCTATGTGCC ATTGTGTGTG TGTGTTGGGG GTGGGGATTG GGGGTGATTT -503
GTGAGCAATT GGAGGTGAGG GTGGAGCCCA GTGCCCAGCA CCTATGCACT GGGGACCCAA -443
AAAGGAGCAT CTTCTCATGA TTTTATGTAT CAGAAATTGG GATGGCATGT CATTGGGACA -383
CGCTCTTTT TCTGTATGG TGGCACATAA ATACATGTGT CTTATAATTA ATGGTATTTT -323
AGATTGACG AAATATGGA TATTACCTGT TGTGCTGATC TTGGGCAAAC TATAATATCT -263
CTGGGCAAAA ATGTCCCAT CTGAAAACA GGGACAACGT TCCTCCCTCA GCCAGCCACT -203
ATGGGGCTAA AATGAGACCA CATCTGTCAA GGGTTTTGCC CTCACCTCCC TCCCTGCTGG -143
ATGGCATCCT TGGTAGGCAG AGGTGGGCTT CGGGCAGAAC AAGCCGTGCT GAGCTAGGAC -83
CAGGAGTGCT AGTGCCACTG TTTGTCTATG GAGAGGGAGG CCTCAGTGCT GAGGGCCAG -23
CAAATATTTG TGGTATGGA TTA1ACTCGAA CTCCAGGCTG TCATGGCGGC AGGACGGCGA +38
ACTTGCA2GT3 TCTCCACGAC CCGCCCTGT4 GAGTCCCCCT CCAGGCAGGT CTATGAGGGG +98
TGTGGAGGGA GGGCTGCCCC CGGGAGAAGA -----
-----1350 bp-----
----- AAGAAGTCCT CCTCAGACAG GTGCCAGTGC CTCCAGATG TGG CAG CTC +1527

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MET TRP GLN LEU -39

Figure 15

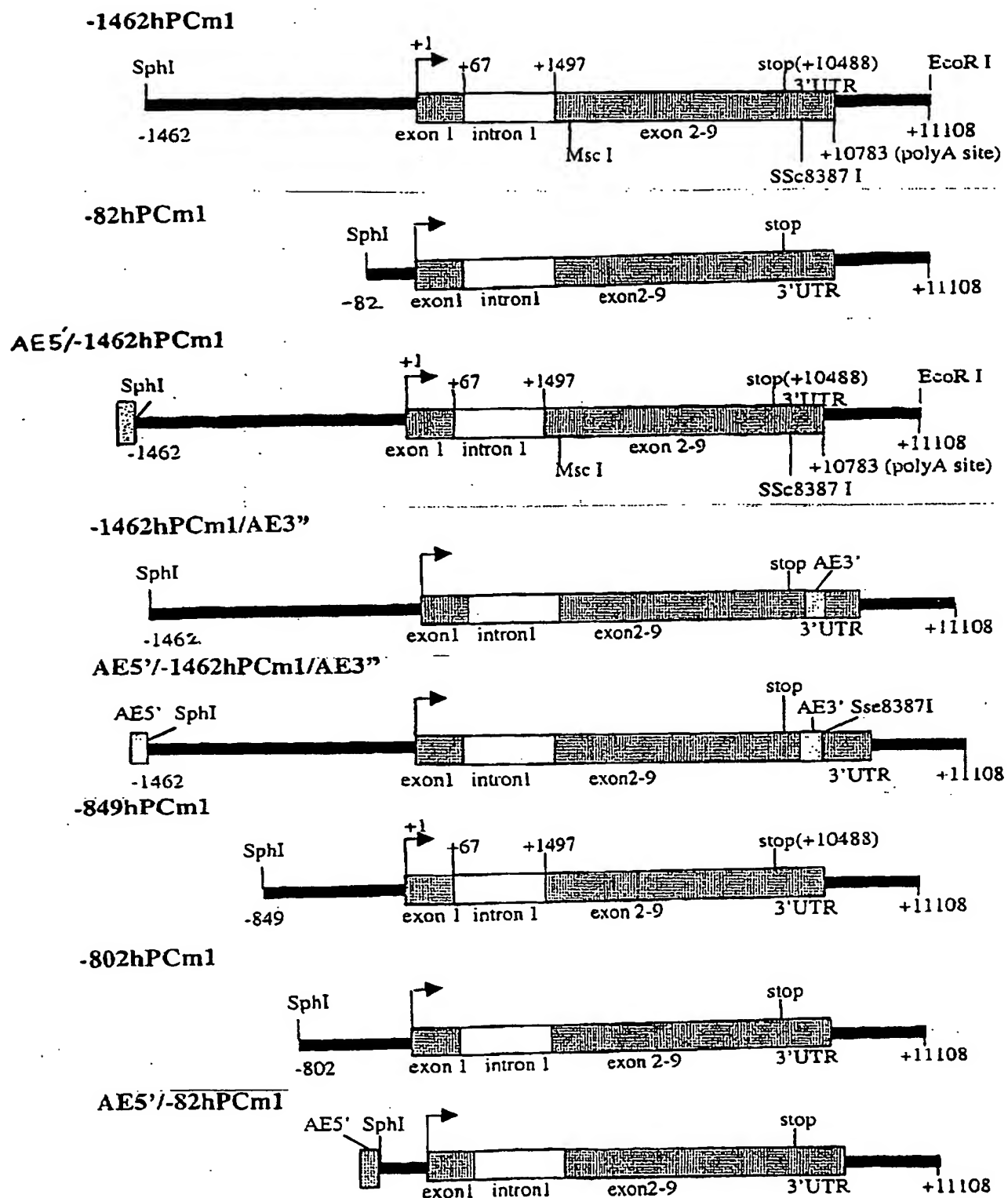


Figure 16

hPC Minigene Constructs	Expression Activity (%±SD)
<p>-1464hPCm1</p>	100
<p>-82hPCm1</p>	98.7±11.8
<p>AE5'/-1464hPCm1</p>	101.9±12.5
<p>-1464hPCm1/AE3''</p>	70.1±7.5
<p>AE5'/-1464hPCm1/AE3''</p>	74.0±3.8

Figure 17A

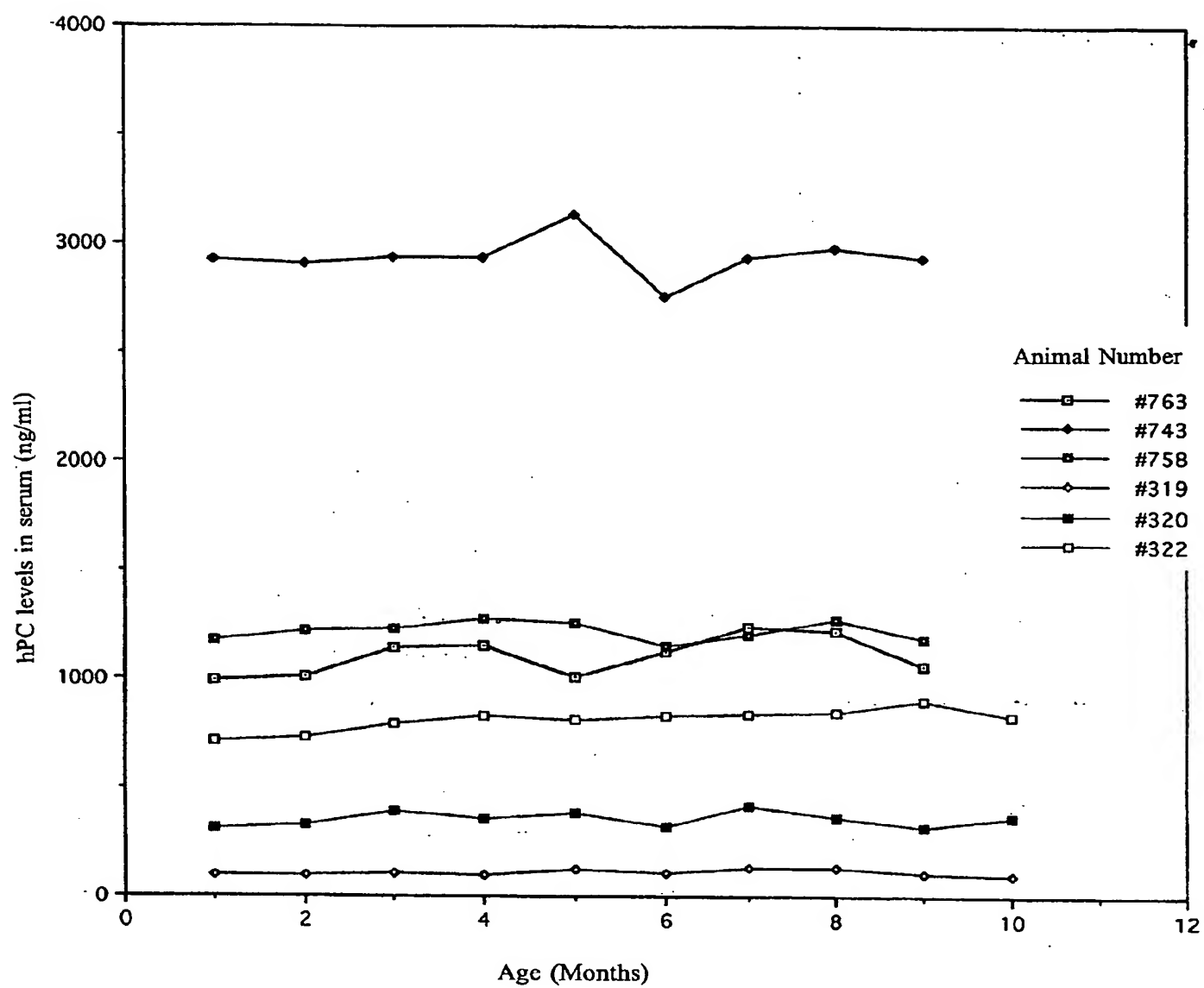


Figure 17B

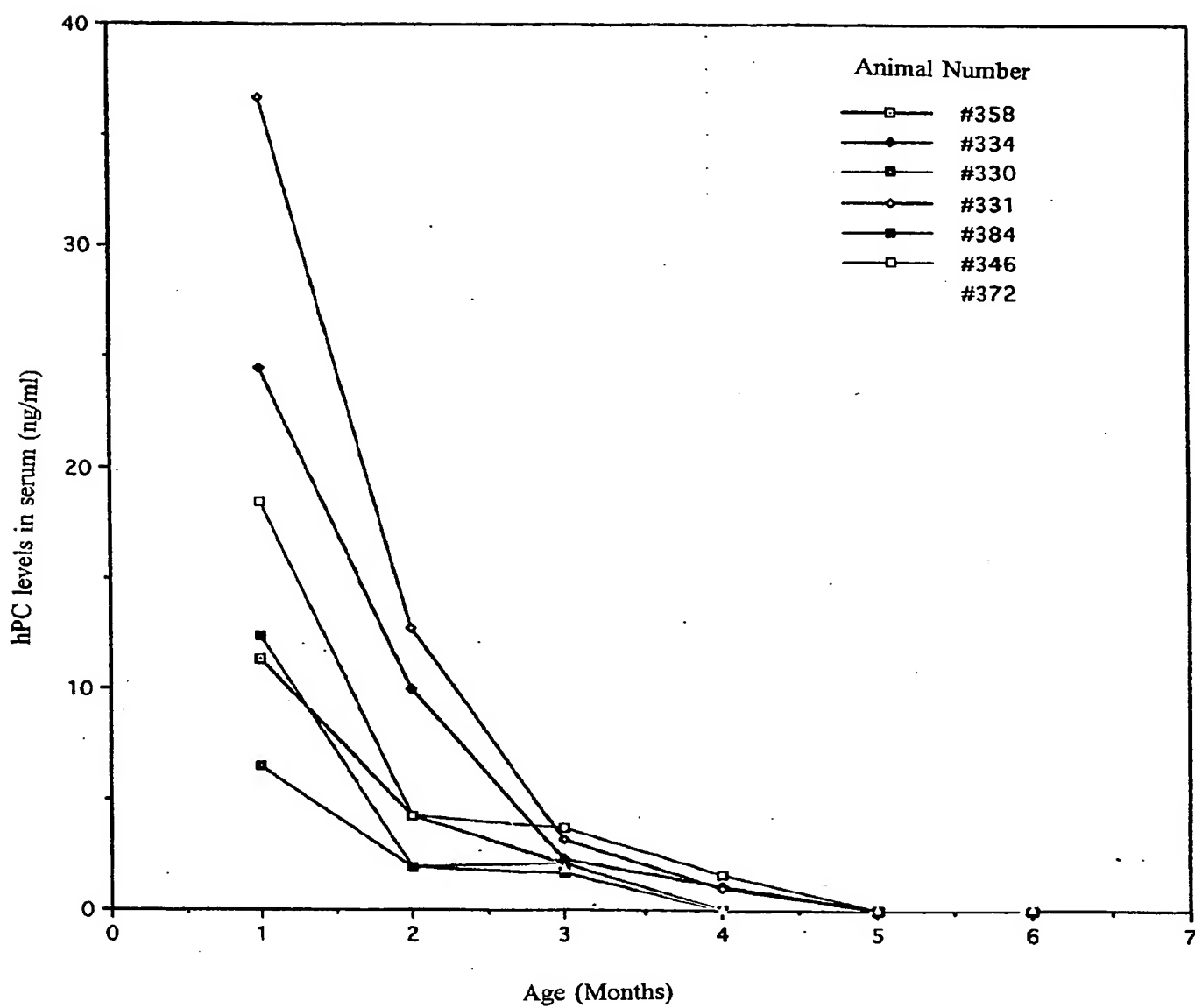


Figure 17C

